

1. Record Nr.	UNINA9910350289603321
Titolo	Textbook of Seismic Design [[electronic resource]] : Structures, Piping Systems, and Components / / edited by G. R. Reddy, Hari Prasad Muruva, Ajit Kumar Verma
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-3176-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (558 pages)
Disciplina	693.852
Soggetti	Engineering geology Engineering—Geology Foundations Hydraulics Mechanics Mechanics, Applied Quality control Reliability Industrial safety Geoengineering, Foundations, Hydraulics Solid Mechanics Quality Control, Reliability, Safety and Risk
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Earthquakes -- Design Basis Ground Motion -- Introduction to Structural Dynamics and Vibration of Single Degree of Freedom Systems -- Analysis of Multi Degrees of Freedom Systems -- Geotechnical Investigation and Its Applications in Seismic Design of Structures -- Earthquake Resistant Design of R.C. Structures: Indian Standard-1893 -- Design of Reinforced Concrete Chimneys -- Seismic Analysis and Design of Steel Structures -- Seismic Analysis and Design of Equipment -- Design and Analysis of Piping and Support -- Seismic Qualification of Structures, Systems and Components by Test -- Retrofitting of Structures and Equipments -- Seismic Base Isolation of

Structures.

Sommario/riassunto

This book focuses on the seismic design of Structures, Piping Systems and Components (SSC). It explains the basic mechanisms of earthquakes, generation of design basis ground motion, and fundamentals of structural dynamics; further, it delves into geotechnical aspects related to the earthquake design, analysis of multi degree-of-freedom systems, and seismic design of RC structures and steel structures. The book discusses the design of components and piping systems located at the ground level as well as at different floor levels of the structure. It also covers anchorage design of component and piping system, and provides an introduction to retrofitting, seismic response control including seismic base isolation, and testing of SSCs. The book is written in an easy-to-understand way, with review questions, case studies and detailed examples on each topic. This educational approach makes the book useful in both classrooms and professional training courses for students, researchers, and professionals alike.
